

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

ORDER NO. R4-2004-0091

**WASTE DISCHARGE REQUIREMENTS
FOR
PORT OF LOS ANGELES
(MAINTENANCE DREDGING)
(FILE NO. 04-063)**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

1. The Port of Los Angeles (hereinafter the "Port") has filed an application for Waste Discharge Requirements to perform maintenance dredging activities at various locations within Los Angeles Harbor. The buildup of sediment at these locations necessitates dredging to restore design depths at several sites.
2. The Port proposes to dredge approximately 66,000 cubic yards (total) by means of a derrick barge-mounted clamshell from the following locations (Figure 1):
 - Berths 90-92 – 5,200 cubic yards (to –37 feet Mean Lower Low Water)
 - Berths 93A-93B – 4,900 cubic yards (to –37 feet Mean Lower Low Water)
 - Berths 122-124 – 6,500 cubic yards (to –45 feet Mean Lower Low Water)
 - Berths 127-131 – 6,700 cubic yards (to –45 feet Mean Lower Low Water)
 - Berths 153-155 – 13,300 cubic yards (to –37 feet Mean Lower Low Water)
 - Berths 165-166 – 4,300 cubic yards (to –38 feet Mean Lower Low Water)
 - Berths 177-179 – 10,400 cubic yards (to –36 feet Mean Lower Low Water)
 - Berths 180-181 – 8,200 cubic yards (to –35 feet Mean Lower Low Water)
 - Berth 240B – 6,500 cubic yards (to –37 feet Mean Lower Low Water).
3. The Port conducted sediment characterization studies to evaluate contaminant concentrations in bottom sediments in the vicinity of the various berths targeted for maintenance dredging. Based on sediment chemistry, sediment toxicity and bioaccumulation testing results, sediments from Berths 122-124 are suitable for ocean disposal (e.g., at LA-2 or LA-3 offshore disposal sites), while test results from other berths demonstrated that the sediments are not suitable for unconfined ocean disposal. The Port proposes land disposal of all dredged sediments, including those from Berths 122-124, at the Anchorage Road Soil Storage Site located within Los Angeles Harbor (Figure 1). If scheduling permits, the Port may dispose of some dredged material within the Southwest Slip Area I West Fill Confined Disposal Facility or within the Pier 300 40-Acre Expansion Fill Site associated with the

April 22, 2004

Channel Deepening Project (Figure 1).

4. Three core samples were collected in 2003 from Berths 90-92 and two core samples were collected from Berths 93A-93B. Because of the limited amount of material to be dredged, all five cores from these two areas were combined into a single composite sample for analysis. Bulk sediment chemistry, elutriate, sediment toxicity and bioaccumulation testing were performed on the composite sample. Bulk sediment chemistry analyses also were performed on each of the five individual core samples (Table 1). Sediments contained 60% or less sand, so this dredged material would not be suitable for reuse in beach replenishment. Total DDT, Total PCB and Total PAH concentrations in some of the individual cores exceeded ERM guidelines (probably toxicity effects associated with such contaminant concentrations). Arsenic, chromium, copper, mercury, nickel, lead and zinc concentrations in some of the individual cores exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations).

Table 1. Sediment Characteristics – Berths 90-92, Berths 93A-93B and Berths 122-124.

Parameter	Berths 90-93 Composite Sample / Range of Individual Core Samples	Berths 122-124 Composite Sample	ERL / ERM Guidelines
Sand	59.1 / 27.4-60.8%	45%	Not applicable
Silt	22.1 / 20.7-78.3%	34%	Not applicable
Clay	18.9 / 18.6-34.2%	19%	Not applicable
Silver	0.326 / 0.405-0.695 ppm	0.73 ppm	1 / 3.7 ppm
Arsenic	6.13 / 7.44-11.7 ppm	7.5 ppm	8.2 / 70 ppm
Cadmium	0.431 / 0.545-0.940 ppm	<0.73 ppm	1.2 / 9.6 ppm
Chromium	38.7 / 53.7 – 81.6 ppm	43 ppm	81 370 ppm
Copper	57.2 / 67.5-114 ppm	54 ppm	34 / 270 ppm
Mercury	0.276 / 0.061-0.367 ppm	0.3 ppm	0.15 / 0.71 ppm
Nickel	18.4 / 23.9-35.8 ppm	26 ppm	21 / 51.6 ppm
Lead	31.0 / 41.1-67.2 ppm	32 ppm	47 / 218 ppm
Selenium	0.172 / 0.531-0.989 ppm	3.6 ppm	Not applicable
Zinc	122 / 123-200 ppm	169 ppm	150 / 410 ppm
Total DDT	56.3 / 47.1-173.2 ppb	44 ppb	1.58 / 46.1 ppb
Total PCB	120 / 74-470 ppb	150 ppb	22.7 / 180 ppb
Total PAH	21441 / 13942-81486 ppb	924 ppb	4022 / 44792 ppb

ppm = parts per million; ppb = parts per billion; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons; ERL = Effects Range Low threshold; ERM = Effects Range Median threshold.

5. Five core samples were collected in 2001 from Berths 122-124. The five cores were combined into a single composite sample for bulk sediment chemistry, sediment toxicity and bioaccumulation analyses (Table 1). Sediments contained approximately 45% sand, so this dredged material would not be suitable for reuse in beach replenishment. Copper, mercury, nickel, zinc, total DDT and Total PCB concentrations exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations). No contaminants exceeded ERM guidelines (probable toxicity effects associated with such concentrations).
6. Five core samples were collected in 2003 from Berths 127-131. The five cores were combined into a single composite sample for bulk sediment chemistry, elutriate, sediment toxicity and bioaccumulation analyses (Table 2). Bulk chemistry analyses also were performed on each of the five individual core samples. Sediments contained 82% or less sand, so this dredged material generally would not be suitable for reuse in beach replenishment. Total DDT and Total PCB concentrations in some of the individual cores exceeded ERM guidelines (probably toxicity effects associated with such contaminant concentrations). Arsenic, cadmium, chromium, copper, mercury, nickel, lead and zinc concentrations in some of the individual cores exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations).
7. Six core samples were collected in 2003 from Berths 153-155. The six cores were combined into a single composite sample for bulk sediment chemistry and elutriate analyses (Table 2). Bulk chemistry analyses also were performed on each of the five individual core samples. Sediments contained 61% or less sand, so this dredged material would not be suitable for reuse in beach replenishment. Mercury, Total DDT and Total PCB concentrations in some of the individual cores exceeded ERM guidelines (probably toxicity effects associated with such contaminant concentrations). Arsenic, cadmium, chromium, copper, nickel, lead and zinc concentrations in some of the individual cores exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations).
8. Four core samples were collected in 2002 from Berths 165-166. The four cores were combined into a single composite sample for bulk sediment chemistry and elutriate analyses (Table 3). Sediments contained approximately 42% sand, so this dredged material would not be suitable for reuse in beach replenishment. Arsenic, chromium, copper, nickel, zinc and Total PCB concentrations in composite samples exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations). Mercury and Total PCB concentrations exceeded ERM guidelines (probable toxicity effects associated with such concentrations).

Table 2. Sediment Characteristics – Berths 127-131 and 153-155.

Parameter	Berths 127-131 Composite Sample / Range of Individual Core Samples	Berths 153-155 Composite Sample / Range of Individual Core Samples	ERL / ERM Guidelines
Sand	69.9 / 53.3-82.1%	41.6 / 35.9-61.3%	Not applicable
Silt	15.0 / 10.6-27.1%	31.3 / 20.1-34.6%	Not applicable
Clay	15.1 / 7.4-28.2%	27.1 / 18.7-29.6%	Not applicable
Silver	0.171 / 0.0963-0.352 ppm	0.374 / 0.274-0.612 ppm	1 / 3.7 ppm
Arsenic	6.01 / 3.47-12.1 ppm	12.3 / 7.08-22.0 ppm	8.2 / 70 ppm
Cadmium	0.464 / 0.217-1.29 ppm	0.910 / 0.466-1.77 ppm	1.2 / 9.6 ppm
Chromium	43.5 / 30.3 – 120 ppm	51.9 / 53.2-121 ppm	81 370 ppm
Copper	40.4 / 24.6-86.2 ppm	89.9 / 63.3-160 ppm	34 / 270 ppm
Mercury	0.23 / 0.125-0.372 ppm	1.11 / 0.224-1.21 ppm	0.15 / 0.71 ppm
Nickel	18.9 / 13.4-35.9 ppm	23.4 / 23.8-37.4 ppm	21 / 51.6 ppm
Lead	46.2 / 17.2-214 ppm	101 / 40.2-114 ppm	47 / 218 ppm
Selenium	<0.075 / 0.239-0.953 ppm	0.162 / 0.313-1.17 ppm	Not applicable
Zinc	104 / 61.8-226 ppm	182 / 140-285 ppm	150 / 410 ppm
Total DDT	20 / 9.5-63 ppb	197 / 39.8-838 ppb	1.58 / 46.1 ppb
Total PCB	250 / 49-810 ppb	390 / 56-3100 ppb	22.7 / 180 ppb
Total PAH	2715 / 493-8094 ppb	11700 / 10520-39169 ppb	4022 / 44792 ppb

ppm = parts per million; ppb = parts per billion; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons; ERL = Effects Range Low threshold; ERM = Effects Range Median threshold.

- Five core samples were collected in 2003 from Berths 177-179. The five cores were combined into a single composite sample for bulk sediment chemistry and elutriate analyses (Table 3). Bulk chemistry analyses also were performed on each of the five individual core samples. Sediments contained 66% or less sand, so this dredged material generally would not be suitable for reuse in beach replenishment. Mercury, nickel, zinc, Total DDT and Total PCB concentrations in some of the individual cores exceeded ERM guidelines (probably toxicity effects associated with such contaminant concentrations). Arsenic, cadmium, chromium, copper, lead and Total PAH concentrations in some of the individual cores exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations).

Table 3. Sediment Characteristics – Berths 165-166 and 177-179.

Parameter	Berths 165-166 Composite Sample	Berths 177-179 Composite Sample / Range of Individual Core Samples	ERL / ERM Guidelines
Sand	42%	42.2 / 34.2-65.8%	Not applicable
Silt	31%	32.8 / 18.3-42.4%	Not applicable
Clay	27%	25.0 / 15.9-25.8%	Not applicable
Silver	0.44 ppm	0.697 / 0.495-0.968 ppm	1 / 3.7 ppm
Arsenic	45 ppm	13.3 / 10.1-19.1 ppm	8.2 / 70 ppm
Cadmium	0.74 ppm	1.53 / 0.974-2.53 ppm	1.2 / 9.6 ppm
Chromium	99 ppm	80.3 / 71.0-131 ppm	81 / 370 ppm
Copper	140 ppm	109 / 93.6-163 ppm	34 / 270 ppm
Mercury	0.84 ppm	1.32 / 0.489-1.4 ppm	0.15 / 0.71 ppm
Nickel	35 ppm	35.5 / 31.2-65.8 ppm	21 / 51.6 ppm
Lead	80 ppm	140 / 82.1-204 ppm	47 / 218 ppm
Selenium	1.2 ppm	0.354 / 0.311-1.08 ppm	Not applicable
Zinc	370 ppm	309 / 234-481 ppm	150 / 410 ppm
Total DDT	115 ppb	784 / 71.6-147 ppb	1.58 / 46.1 ppb
Total PCB	110 ppb	200 / 84-2000 ppb	22.7 / 180 ppb
Total PAH	8600 ppb	11496 / 10213-17894 ppb	4022 / 44792 ppb

ppm = parts per million; ppb = parts per billion; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons; ERL = Effects Range Low threshold; ERM = Effects Range Median threshold.

10. Five core samples were collected in 2003 from Berths 180-181. The five cores were combined into a single composite sample for bulk sediment chemistry and elutriate analyses (Table 4). Bulk chemistry analyses also were performed on each of the five individual core samples. Sediments contained 54% or less sand, so this dredged material would not be suitable for reuse in beach replenishment. Mercury, lead, nickel, zinc, Total DDT and Total PCB concentrations in some of the individual cores exceeded ERM guidelines (probably toxicity effects associated with such contaminant concentrations). Arsenic, cadmium, chromium, copper, silver and Total PAH concentrations in some of the individual cores exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations).

11. Five core samples were collected in 2001 from Berth 240B. The five cores were combined into a single composite sample for bulk sediment chemistry and elutriate

analyses (Table 4). Sediments contained 61% sand, so this dredged material would not be suitable for reuse in beach replenishment. Mercury, Total DDT and Total PCB concentrations in composite samples exceeded ERM guidelines (probably toxicity effects associated with such contaminant concentrations). Copper, lead and Total PCB concentrations exceeded ERL guidelines (possible toxicity effects associated with such contaminant concentrations).

Table 4. Sediment Characteristics – Berths 180-181 and 240B.

Parameter	Berths 180-181 Composite Sample / Range of Individual Core Samples	Berth 240B Composite Sample	ERL / ERM Guidelines
Sand	37.1 / 20.6-54.1%	61%	Not applicable
Silt	32.1 / 23.3-43.4%	25%	Not applicable
Clay	30.8 / 22.5-36.0%	14%	Not applicable
Silver	0.993 / 0.632-1.04 ppm	<0.14 ppm	1 / 3.7 ppm
Arsenic	14.8 / 7.10-19.1 ppm	5.5 ppm	8.2 / 70 ppm
Cadmium	3.97 / 1.58-2.90 ppm	1.7 ppm	1.2 / 9.6 ppm
Chromium	124 / 98.1-145 ppm	27 ppm	81 / 370 ppm
Copper	190 / 129-181 ppm	63 ppm	34 / 270 ppm
Mercury	1.32 / 1.00-1.39 ppm	2 ppm	0.15 / 0.71 ppm
Nickel	68.5 / 69.7-152 ppm	15 ppm	21 / 51.6 ppm
Lead	259 / 160-202 ppm	78 ppm	47 / 218 ppm
Selenium	0.951 / 0.562-1.10 ppm	<0.7 ppm	Not applicable
Zinc	556 / 386-470 ppm	143 ppm	150 / 410 ppm
Total DDT	208 / 129-317 ppb	90 ppb	1.58 / 46.1 ppb
Total PCB	380 / 180-450 ppb	<140 ppb	22.7 / 180 ppb
Total PAH	20649 / 9654-28202 ppb	11496 / 10213-17894 ppb	4022 / 44792 ppb

ppm = parts per million; ppb = parts per billion; DDT = dichloro-diphenyl-trichloroethane; PCB = polychlorinated biphenyls; PAH = polynuclear aromatic hydrocarbons; ERL = Effects Range Low threshold; ERM = Effects Range Median threshold.

12. The Regional Board adopted a revised Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties on June 13, 1994. The Water Quality Control Plan contains water quality objectives for Los Angeles Harbor. The requirements contained in this Order as they are met will be in conformance with the goals of the Water Quality Control Plan.

13. The beneficial uses of the inner harbor waters are: industrial service supply, navigation, water contact recreation (potential use), non-contact water recreation, commercial and sport fishing, marine habitat, preservation of rare and endangered species, and shellfish harvesting (potential use). The beneficial uses of the outer harbor waters are: navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, preservation of rare and endangered species, and shellfish harvesting (potential use).
14. The City of Los Angeles filed a Notice of Exemption (citing Article III, class 4(15) of the City CEQA Guidelines, which corresponds with 14 CCR section 15304(g) of the CEQA Guidelines) for the Maintenance Dredging Project on July 9, 2003, pursuant to Public Resources Code section 21000 et seq. The United States Army Corps of Engineers issued Permit No. 200201530-JLB in 2003 for maintenance dredging operations within the Port.
15. With proper management of the dredging and disposal operations, the project is not expected to release significant levels of contaminants to the Harbor waters or other State waters nor adversely impact beneficial uses.
16. Dredging and disposal operations will be accomplished through the use of temporary equipment. The Waste Discharge Requirements imposed below will not result in any significant increase in energy consumption.

The Regional Board has notified the Port and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that the Port of Los Angeles, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act as amended, and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Requirements

1. The removal and placement of dredged/excavated material shall be managed such that the concentrations of toxic pollutants in the water column, sediments or biota shall not adversely affect beneficial uses, in particular those identified in Finding number 13 above.

2. Enclosed bay and estuarine communities and populations, including vertebrate, invertebrate and plant species, shall not be degraded as a result of the discharge of waste.
3. The natural taste and odor of fish, shellfish or other enclosed bay and estuarine resources used for human consumption shall not be impaired as a result of the discharge of waste.
4. Toxic pollutants shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.
5. There shall be no acute toxicity or chronic toxicity in ambient waters as a result of the discharge of waste.
6. The Port shall conduct the monitoring required and comply with the reporting requirements outlined in the attached Monitoring and Reporting Program, which is incorporated by reference as part of these Waste Discharge Requirements.
7. Dredging, excavation or disposal of dredge spoils shall not cause any of the following conditions in the receiving waters:
 - a. The formation of sludge banks or deposits of waste origin that would adversely affect the composition of the bottom fauna and flora, interfere with the fish propagation or deleteriously affect their habitat, or adversely change the physical or chemical nature of the bottom.
 - b. Turbidity that would cause substantial visible contrast with the natural appearance of the water outside the immediate area of operation.
 - c. Discoloration outside the immediate area of operation.
 - d. Visible material, including oil and grease, either floating on or suspended in the water or deposited on beaches, shores, or channel structures outside the immediate area of operation.
 - e. Objectionable odors emanating from the water surface.
 - f. Depression of dissolved oxygen concentrations below 5.0 mg/l at any time outside the immediate area of operation.
 - g. Any condition of pollution or nuisance.

B. Provisions

1. The Discharge Requirements specified above are valid only for dredging and disposal of a maximum volume of 66,000 cubic yards of sediment, as proposed by the Port.
2. The Port shall notify the Regional Board immediately by telephone of any adverse conditions in receiving waters or adjacent areas resulting from the removal of dredge materials; written confirmation by the Port to the Regional Board shall follow within one week.
3. A copy of this Order shall be made available at all times to project construction personnel.
4. The Port shall provide the following information to the Regional Board:
 - a. The scheduled date of commencement of each dredging operation and an engineering plan and profile of the excavation and the disposal site at least two weeks prior to commencement.
 - b. Notice of termination of the operation, within one week following the termination date.
5. The Port shall submit, under penalty of perjury, technical reports to the Regional Board in accordance with specifications prepared by the Executive Officer.
6. In accordance with section 13260(c) of the Water Code, the Port shall file a report of any material change or proposed change in the character, location, or volume of the waste.
7. These requirements do not exempt the Port from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste discharge, and they leave unaffected any further restraint on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
8. In accordance with Water Code section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into waters of the State are privileges, not rights.

9. This Order includes Attachment N: "Standard Provisions, General Monitoring and Reporting Requirements" ("Standard Provisions") and the attached Monitoring and Reporting Requirements, both of which are incorporated herein by reference. If there is any conflict between provisions stated hereinbefore and said "Standard Provisions", those provisions stated hereinbefore prevail. If there is any conflict between requirements stated in the attached Monitoring and Reporting Program and said "Standard Provisions", the former shall prevail.
10. This Order fulfills the requirements for a Clean Water Act Section 401 Water Quality Certification for the proposed project. Pursuant to section 3860, Title 23, California Code of Regulations (23 CCR), the following three standard conditions shall apply to this project:
 - a. this certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and 23 CCR section 3867 et seq.;
 - b. this certification action is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought;
 - c. this certification is conditioned upon total payment of any fee required pursuant to 23 CCR division 3, chapter 28, and owed by the applicant.

11. This Order shall expire on June 30, 2006.

I, Dennis A. Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on June 10, 2004.

David A. Baehorowski, AEO
DENNIS A. DICKERSON
Executive Officer

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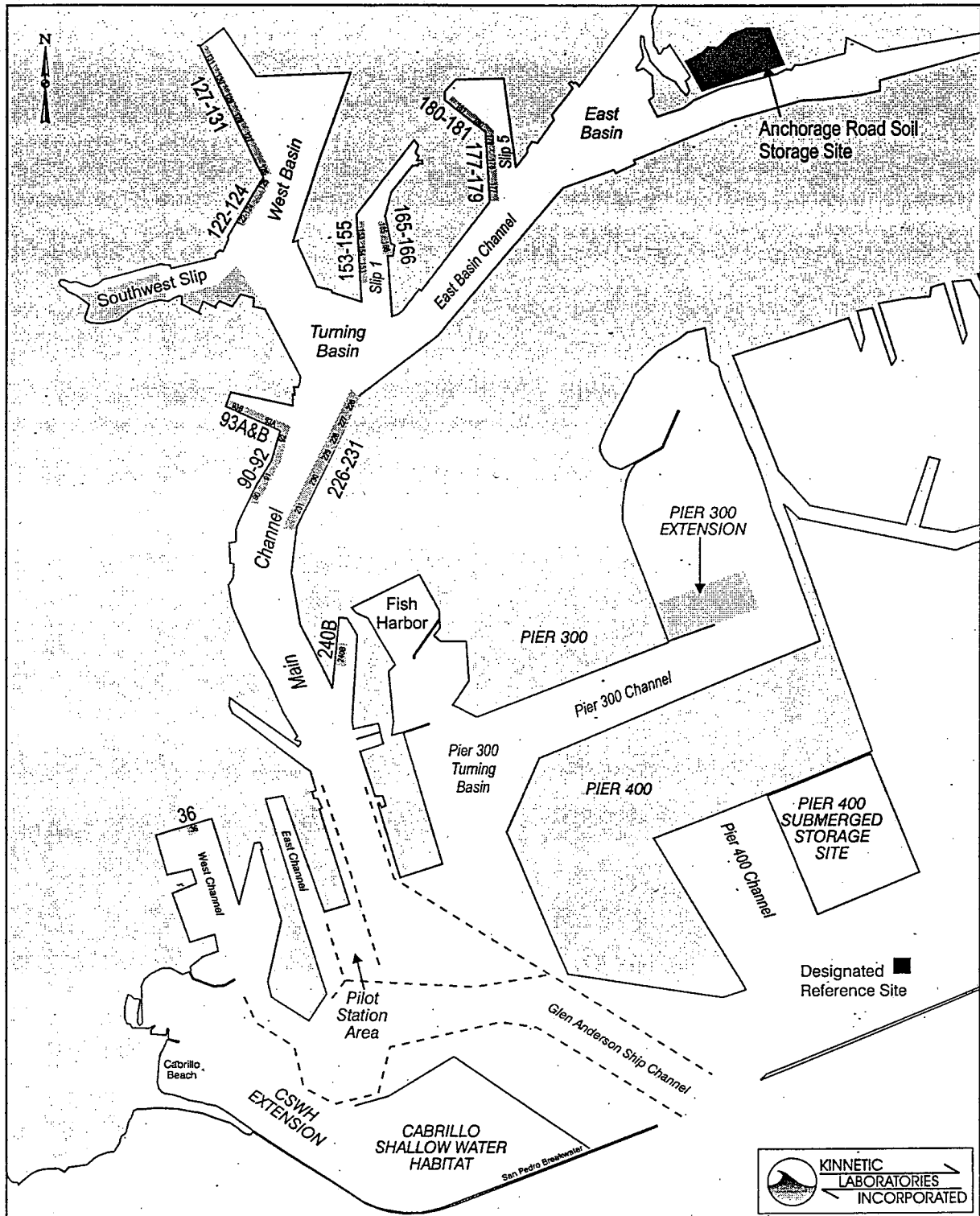


Figure 1. Maintenance Dredging Locations and Disposal Sites Within Los Angeles Harbor.